

Cumulative Review 6

Name _____ Date _____ Period _____

Simplify each expression by reducing fractions where necessary, adding, subtracting, multiplying and/or dividing.

$$1. \frac{\frac{1}{x}}{\frac{y}{x}}$$

$$2. \frac{\frac{x}{1}}{\frac{1}{x}} + \frac{\frac{y}{1}}{\frac{1}{y}}$$

$$3. (1-x)(1+x)$$

$$4. \left(x \cdot \frac{y}{x} + 1\right)(y-1)$$

$$5. \frac{1+x \cdot \frac{y}{x} \cdot \frac{1}{y}}{\frac{1}{y}}$$

$$6. \frac{\left(x \cdot \frac{y}{x} + 1\right)(y-1)}{1-y^2}$$

$$7. (x-y)(x+y)$$

$$8. (1-2y)(1+y)$$

Factor the following polynomials.

$$9. y^2 - x^2$$

$$10. x^2 - 25$$

$$11. x^2 - 2x + 1$$

$$12. 2x^2 + x - 1$$